REMARKS

Applicant intends this response to be a complete response to the Examiner's **20 October 2009** Final Office Action. Applicant has labeled the paragraphs in his response to correspond to the paragraph labeling in the Office Action for the convenience of the Examiner.

Preliminary Statement

Applicant points out that the cross-laminate of the present claims differ from any of the laminates disclosed in the cited prior art in a number of characteristics at least two of which are: (1) cross-laminate formed of co-extruded structured films, (2) co-extruded structured films including a main layer, a bonding layer and thin strands, where the bonding layer is co-extruded on top of the main layer and the strands are co-extruded on top of the bonding layer, and (3) a bonding structure resulting from lamination, where the bonding structure comprises three bond types – (a) spots bonds – bonds at the intersections of film A strands and film B strands, (b) bonds between strands of one film and the bonding layer of the other film, and (c) bonds between the bonding layer of one film and the bonding layer of the other film.

1. All features of the laminates of the present invention are formed during extrusion. There are no separate structures that are coated and/or embedded within a polymeric material. The strands are co-extruded onto the bonding layer and the bonding layer is co-extruded onto the main layer, all performed during the extrusion process. Thus, as the film is being formed, all layers are extruded in one process – they are all co-extruded. There are no structures form separately of the extrusion process. Thus, there are no separate components such as reinforcing fibers that become embedded or encased in a polymeric material.

2. The resulting laminate includes a bonding system that has three different bond types, *i.e.*, when laminated, three distinctly different bonds are formed between the two co-extruded films. A first bond type formed between strands on one film and strands on the other film (spot bonds, strand to strands bonds at crossing spot). A second bond type formed between a strand on one film and a bonding layer of the other film (line segment bonds, strand to bonding layer bonds). A third bond typ formed between a bonding layer of one film and a bonding layer of the other film (areas bonds, bonding layer to bonding layer bonds, where the bonding layers are devoid of strands). While the bonding strengths of each bond type can be adjusted to some extent, the bond strength of the first bond type are always greater than the bond strength of the third bond type due to the choice of the polymers making up the strands and making up the bonding layer. The bond strength of the second bond type depend on the polymer composition of the strand and the bonding layer, but is generally between the bond strength of the first bond type and the third bond type.

3. The strands are thin as shown in Figure 1.

Applicant also note that the Examiner is relying on teaching of a minimum of four references and up to six references. It seems to Applicant that anything that takes so many references, would

be non-obviousness on its face.

DETAILED ACTION

Claims

The Examiner states and contends as follows:

1. Claims 123-151 are pending with claims 149-151 new.

Applicant acknowledges the statements of the Examiner.

WITHDRAWN REJECTIONS

The Examiner states and contends as follows:

2. All rejections of record in the Office action mailed 4/24/2009 have been withdrawn due to Applicant's amendments in the Paper filed 7/24/2009.

Applicant acknowledges the statements of the Examiner.

NEW OBJECTIONS

Specification

The Examiner states and contends as follows:

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the phrases "where the strands comprise coextruded thin lines" in claim 123, line 39, "where distances between adjacent arrays of strands measured from arrays center are the same or different and are between about 8 cm and about 3 mm" in claim 149, lines 2-3, "where a distance between adjacent arrays of strands measured from arrays center are the same or different and are between about 8 cm and about 3 mm" in claim 150, lines 2-4 and "where a distance between adjacent arrays of strands measured from arrays center are the same or different and are between about 8 cm and about 3 mm" in claim 151, lines 2-4 are not supported by the text of the Specification. If Applicant believes support is present in the figures then Applicant is advised to amend the text of the Specification while being careful not to add new matter.

Applicant has amended the claims to remove the language. The specification uses lines in a different manner than strands. The specification uses the term thin strands not thin lines. Applicants, therefore, have conformed the claims to the specification. The same or different language is supported in the specification, but not in the direct teaching of the "same or different" phrase. Thus, the Applicant has removed the offending phrase.

NEW REJECTIONS

The Examiner states and contends as follows:

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Applicant acknowledges the statements of the Examiner.

Claim Rejections - 35 USC § 112

5. **Claims 123-151** stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Examiner states and contends as follows:

> 6. The phrase "where the strands comprise coextruded thin lines" in claim 123, line 39 is new matter. The terms strands and thin lines do not have the same meaning.

Applicant has amended the claims to remove the language. The specification uses lines in a different manner than strands. The specification uses the term thin strands not thin lines. Applicants, therefore, have conformed the claims to the specification. Applicant, therefore, respectfully requests withdrawal of this rejection.

7. **Claims 123-151** stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states and contends as follows:

> 8. The term "thin" in claim 123, line 39 is a relative term which renders the claim indefinite. The term "thin" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A person having ordinary skill in the art may interpret a line as being thin while another person having ordinary skill in the art could interpret the same line as not being thin.
> Clarification and/or correction required.

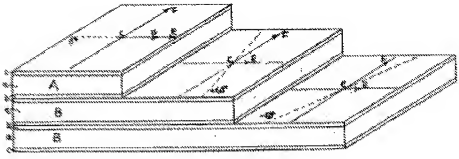
Applicant has removed the offending language, but notes the Figure 1 clearly shows that strands to be thin and line like. Applicant, therefore, respectfully requests withdrawal of this rejection.

Claim Rejections - 35 USC § 103

9. **Claims 123-127, 129-130, 136-140, 143-144 and 147-148** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743) and Cederblad et al. (US 6,204,207).

The Examiner states and contends as follows:

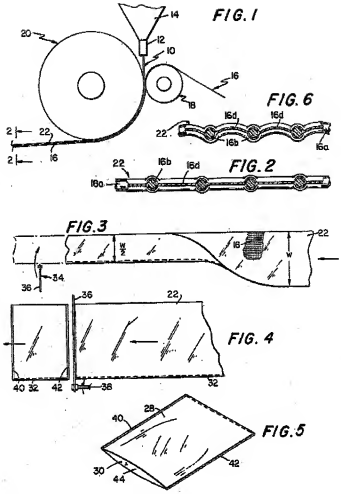
> The language regarding the strand limitations in independent claim 123 is broad with minimal specificity distinguishing the strands as reinforcing strands, non reinforcing strands, ribs, striations, streaks, etc. or whether the strands are flat, round, etc .
> Analysis and evidence is lacking regarding any structural differences for a laminate with strands that are coextruded as opposed to strands that are embedded in a polymeric structure.
> Rasmussen (,102) teaches a cross-laminate comprising a first coextruded film having a main direction of uniaxial unbalanced biaxial molecular orientation *(See p. 5, ll. 26-31 and FIG-2, cross laminate with multiple layers and sublayers.)*



The films A and B comprise heat seal layers #c, main layers #a and lamination layers #b, with individual compositions bonded to each other in the laminate as illustrated in FIG-2 as well as bonding of the layers when the layers are wrapped such as in a gusseted tube. Since the layers have different compositions the bonding and adhesive strengths are different. Since some portions of the laminate are bonded at the seam there are regions of some of the laminate substrates that have additional bonding that is not present in other regions (See *p.* 2, *ll.* 42-58, *p.* 11, *l.* 25 *to p.* 12, *l.* 14, *p.* 5, *ll.26-31, p.* 6, *ll.* 1-9 *and FIG-2. The Examiner interprets continuous to mean anything such as color, width, length, thickness, surface property, etc.. The claims do not set forth which side of film A is facing any particular side of film* B, *whether the main layers are the outermost or innermost surfaces of the laminate or just one is on an outermost surface. The claims do not require the strands from film A to be in "direct" coniact with the strands in film* B. *Thus, the strands can be in indirect contact or embedded. The claims state the strands intersect each other, however, the strands are not interpreied as intersecting each other in a way that one would ordinary understand intersect to mean. The strands are interpreied as being in either the same or different planes from one another and not required to be in direct contact. Since the separation of the strands includes 0 cm, the strands do not need to be separated at all and a single polymeric layer of any dimension. Since, the strands do not need to be separated then there also does not have to be regions where there are not strands and thus no regions above and below the strands that are directly bonded to each other. There is no apparent difference in the structure between strands that are coextruded and those that are not.),* however, fails to expressly disclose wherein the various layers are continuous, having a plurality of strands in films A and B, the bonding being different between the various layers and regions within the layer, a thickness increase of the films A and B at their respective strand locations being at most 20%/(10%) of a film thickness of the films A and B in adjacent regions of the films A and B devoid of their respective strands, the first and second polymer materials and comprising a polymer consisting essentially of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100°C or a blend of such copolymer and LLDPE containing at least 25% of the copolymer and where the strands have a thickness of no more than 30% of a thickness of their respective films at their thickest, and where the strands comprise coextruded thin lines.

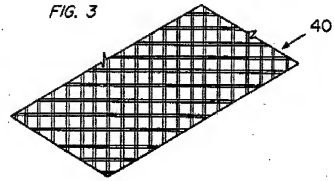
However, Rasmussen (,102) teaches where the structure is made into bags, wherein the layers are continuous when wrapped such as with a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate. Each layer clearly has a pattern whether it is substantially the same, including wave shaped web with stabilized waves *(See p.* 8, *ll.* 28-32.), within the layer or upon the bonded and non-bonded areas with various bonding strengths and the additional layers and or/markings will clearly be applied at various regions in a continuous manner to provide for the desired messages *(See p.* 6, *ll.* 1-9.). Pigments are added to the various compositions providing for further patterns *(See p.* 11, *l.* 25 *to p.* 12, *l.* 14.) for the purpose of providing a pleasing, strong bag for containing the packaged goods *(See p. 6, ll.* 1-9.).

Hendrickson ('577) teaches a polymeric bag reinforced with a two sets of crossing strands/ (thin lines) of a first polyolefin polymer that may be woven or nonwoven into a grid while the polymeric sheets are made from a different polyolefin polymer, thus, providing for different bonding properties between the sets of strands, top and bottom sheets and between the strands and the sheets *(See col.* 3, *l.* 32 *to col.* 6, *l. 35 and FIGs* 2-6, *with a bag* as *illustrated in FIG-5 and strands* #16 *illustrated in FIGs 2-3 and* 6. *The strands are clearly capable of being coextruded along with the film without there being any apparent structural difference between coextruded and non coextruded strands.)*



and the thickness of the film and at the location of the strands being the same as at the location between the strands *(See col.* 4, *I.* 57 *to col.* 5, *I.* 1.) for the purpose of providing bags with improved strength and capable of accommodating larger payloads *(See col. 6, II. 36-61.).*

Wynne ('743) teaches a polymeric material *(See FIG-3, #40 and col.* 5, *II. 5-59.)*



with multiple polyolefin polymeric layers being reinforced with a grid of crossing strands #54A and #548 and #30-32 made of different materials *(See FIGs 4 and 2.)*

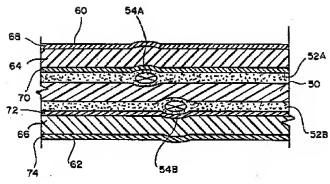


FIG. 4

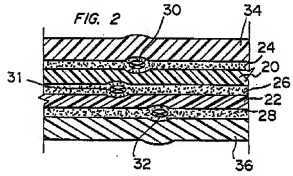


FIG. 2

usable as a packaging material that can be seamed into bags *(See col.* 5, *II.* 16-59.) for the purpose of providing a strong, reinforced protective material *(See col.* 5, *II. 44-59.).*

Cederblad (,207) teaches a laminate with strands where the layers comprise a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100°C *(See col.* 12, *I.* 42 *wherein the melting point is 67°C /152 of.)* for the purpose of forming firm bonds *(See col.* 6, I. 63.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the above structure with a continuous and patterned structure as taught by Hendrickson ('577), Wynne ('743) and Cederblad ('207)and obviously taught by Rasmussen (,102) in Rasmussen (,102) in order to provide a strong material capable protecting and accommodating larger payloads.

The phrases "a separation between adjacent film A first strands is no more than 8 cm" in claim 123, lines 13-14 and 24-25 are not limiting since they include values of "0 cm" or no separation.

The phrase "where the strands have a thickness of no more than 30% of a thickness of their respective films at their thickest" in claim 123, lines 37-38 is not limiting since it includes values of zero.

The phrases "adapted to ***" in claim 124, line 3 and claim 143, line 2 do not limit the claims' scope since said language **does not limit the claim to a particular structure** *(See MPEP 2111.04).*

For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, **"consisting essentially of"** will be construed as equivalent to "comprising". See, e.g., PPG, 156 F.3d at 1355,48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). MPEP 2111.03 Also, If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). The "consists/ (consisting) essentially of' language is used in claim 141, line 2 and claim 142, line 6.

Applicants have amended claim 123 and 147 to clarify that the bonding patterns are formed between two facing surfaces of the film A and the film B so the bonding layers and arrays of strands

are laminated in direct contact with each other.

Moreover, the exact form of the array of strands is not relevant to differentiate the present invention from the prior art. The present invention is distinguished from the prior in that the film structures are all made during an extrusion process (the film components are co-extruded) and the lamination process produces unique bonding patterns between facing surfaces of the films and the bonding patterns comprise three different bond types – spot bonds (direct bonds between the strands where the cross), line bonds (where the strands contact the bonding layer) and area bonds (where the bonding layers contact). Applicant has amended claim 123 and 147 to state that the spot-bonds are directly bonds between strands on film A and film B, where the strands intersect. Support for direct bonding can be found at least at original claim 29 and paragraph [0075] and throughout the application.

Rasmussen 102 does not include array of anything let alone arrays of strands. Rasmussen 102 has only a single type of bond formed between the films – area bonds between a continuous bonding layer on one film and a continuous bonding layer of the other film. The Examiner attempts to torture the express teaching of Rasmussen 102 to support additional bond type, **but these bonds are not formed between facing surfaces of the films**. These "extrabonds" are formed **only** at edges of contact when the film is formed into a tube. This is not what is claimed here.

Even if one were to fold a laminate of Rasmussen 102 in half and heat seal the overlapping regions, one would still only have at most two continuous area bonds – one between the films and one between the laminate faces. If the laminate faces are made of the same material as the bonding layers interposed between the films, the there would be only a single bonding type. Rasmussen 102 does not disclose, teach or even suggest arrays of co-extruded strands or a bonding pattern involving spot-bonds between the strand or line bonds between the strands of one film and the bonding layer of the other film. This bonding pattern is formed between the layer not at their edges or folds.

To cure these glaring deficiencies in Ramussen 102, the Examiner relies on the combined teaching of three additional references: Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743) and Cederblad et al. (US 6,204,207). All three disclose reinforcing scrims (Hendrickson at Col. 3, ll. 53-65), reinforcing yarns (Wynne et al. at Col. 4, ll. 9-31), or reinforcing criss-crossing strands of low melting plastics (Cederblad et al. at Col. 4, ll. 11-67). While these reference do disclose "strands", the strands in these references are associated with a pre-made reinforcing structure. In Hendrickson and Wynne et al. the strands of the reinforcing material is a separate structure that is then encased in a polymer, while in Cederblad et al. the structure is covered with at least on covering. Nothing is co-extruded and there is no teaching in these three references concerning co-extrusion. The references do not disclose, teach or even suggest the co-extruded films of this invention nor the bonding patterned formed during lamination between co-extruded films of this invention.

Basically, there is no way to combine the teachings to arrive at the cross-laminates of the present invention. Cross-laminates comprising films having at least three components formed during

extrusion: a main layer, a bonding layer and arrays of strands, where the bonding layer is extruded to top of the main layer and the arrays of strand are extruded on top of the bonding layer, all during the extrusion process. The structure of the films are not disclosed in any of these references individually or collectively, nor is the bonding pattern. These attributes of the present invention give the cross-laminates surprising and unexpected properties.

Nothing in this collections of references disclose, teach or even suggest the cross-laminates as claimed in claim 123, Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner states and contends as follows:

> Regarding claims 138-140, Rasmussen (102), Hendrickson ('577) and Wynne ('743) teach the laminate discussed above, however, fail to expressly disclose wherein an average melting point of the third polymer material and average melting point of the sixth polymer materials are at least about 1 0°C/(15°C)/(20°C) lower than an average melting pOint of the first polymer material and an average melting point of the fourth polymer material.
>
> However, Cederblad (,207) teaches a strand reinforced polymer structure where the average melting point of the polymer material of the layers of the films differ *(See col.* 12, *II.* 38-53.) for the purpose of providing firm and light bonds *(See col.* 6, *II. 60*-67.).
>
> Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide strands with melting points below that of the films as taught by Cederblad (,207) in Rasmussen (102) in order to produce a laminate with firm and light bonds.

Applicant asserts his arguments set forth above here, and note that regardless of the materials used in the reference, the references do not disclose, teach or even suggest the cross-laminates and cannot render claims 138-140 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

10. **Claims 128, 131-135, 141 and 149-151** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743), Cederblad et al. (US 6,204,207) and Lappala (US 2,851,389).

The Examiner states and contends as follows:

> Regarding claim 128, Rasmussen (102), Hendrickson (,577), Wynne ('743) and Cederblad ('207) teach the laminate discussed above, however, fail to expressly disclose where a collective area of the film A first strands and film B first strands comprises no more than 60% of a surface area of their respective film sides.
>
> However, Lappala ('389) teaches a strand reinforced layered structure where any suitable diameter strand may be used *(See col.* 2, *I.* 45, *any suitable diameter can be used.),* which clearly changes the above area ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select a strand with a diameter that provides the above area ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong *(See col.* 1, *II. 25*-28.).

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., and Cederblad et al. The Examiner now adds Lappala, but Lappala, like Hendrickson, Wynne et al., and Cederblad et al., disclosed pre-formed grid or screen of strands of reinforcing fibrous materials – nylon, cotton, cellulose, rayon, etc. that is then encased in an adhesive, which adhesively bonds clear cover sheets over the encased screen. The combination of

these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 128 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner states and contends as follows:

> Regarding claims 131-133 Rasmussen (102), Hendrickson (,577), Wynne ('743) and Cederblad (,207) teach the laminate discussed above, however, fail to expressly disclose wherein a volume of the film A strands and the film B strands is not greater than 15%/(10%)/(5%) of a volume of their respective films.
>
> However, Lappala ('389) teaches that any suitable diameter strand may be used *(See col.* 2, *l.* 45, *any suitable diameter can be used.)*, which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select a strand with a diameter that provides the above volume as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (See *col.* 1, ll. 25-28.).

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., Cederblad et al. and Lappala here. Regardless of the volume of strands, the strands are not co-extruded features of the films. Moreover, the Lappala strands like the Hendrickson, Wynne et al., Cederblad et al. do not support strand to strand bonding at crossing points in conjunction with line bonding and area bonding. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claims 131-135 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner states and contends as follows:

> Regarding claims 134-135, Rasmussen (102), Hendrickson (,577), Wynne ('743) and Cederblad (,207) teach the laminate discussed above, however, fail to expressly disclose the separation between first strands on films A and B is between 2 mm and 40 mm/(at the highest 20 mm) measured from the middle of one strand to a middle of an adjacent strand.
>
> However, Lappala ('389) teaches that any suitable pattern may be used *(See col. 2, l.* 49-51, *any suitable pattern.)* for the purpose of providing a laminate that is light and strong (See *col.* 1, *ll. 25-28.)*.
>
> Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select a suitable pattern that provides the above separation as taught by Lappala ('389) in Rasmussen (102) in order to provide a laminate that is light and strong.

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., Cederblad et al. and Lappala here. Regardless of the separation between arrays of strands, the strands are not co-extruded features of the films. Moreover, the Lappala strands like the Hendrickson, Wynne et al., Cederblad et al. do not support strand to strand bonding at crossing points in conjunction with line bonding and area bonding. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 134-135 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner states and contends as follows:

> Regarding claim 141, Rasmussen (102), Hendrickson ('577), Wynne ('743) and Cederblad ('207) teach the laminate discussed above, however, fail to expressly disclose wherein the main layer of each of the two films A and B consists essentially of polyethylene or polypropylene.
>
> However, Lappala ('389) teaches wherein the main layer of each of the two films A and B

is polyethylene *(See col. 2, I. 31 and II. 66-67.)* for the purpose of providing a laminate that is light and strong *(See col. 1, II. 25-28.)*.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to provide polyethylene layers as taught by Lappala ('389) in Rasmussen (102) in order to provide a laminate that is light and strong.

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., Cederblad et al. and Lappala here. Regardless of the composition of the main layers, the film are not co-extruded with all of their features in place prior to lamination. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 141 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner states and contends as follows:

Regarding claims 149-151, Rasmussen (102), Hendrickson (,577), Wynne ('743) and Cederblad (,207) teach the laminate discussed above, however, fail to expressly disclose where distances between adjacent arrays of strands measured from arrays center are the same or different and are between about 8cm and about 3 mm, wherein the film A first strands, the film A second strands, the film B first strands and the film B second strands are arranged in arrays, where a distance between adjacent arrays of strands measured from arrays center are the same or different and are between about 8cm and about 3 mm, wherein the film A first strands, the film A third strands, the film B first strands and the film C first strands are arranged in arrays, where a distance between adjacent arrays of strands measured from arrays center are the same or different and are between about 8cm and about 3 mm.

However, Lappala ('389) teaches a strand reinforced layered structure where any suitable diameter strand may be used *(See col. 2, I. 45, any suitable diameter can be used.)*, which clearly changes the above separation. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select a strand having the above separation and orientation in view of Lappala ('389) for the purpose of providing a laminate that is light and strong *(See col. 1, II. 25-28.)*.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select strands that provides the above separation and orientation as taught by Lappala ('389) in order to provide a laminate that is light and strong.

Applicant has canceled claims 149-150 rendering the rejection moot.

11. **Claim 142** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743), Cederblad et al. (US 6,204,207), Rasmussen (US 4,039,364) and Velazquez (US 5,614,297).

The Examiner states and contends as follows:

Rasmussen (,102), Hendrickson ('577) and Wynne ('743) teach the laminate discussed above, and Rasmussen ('364) teaches a laminate wherein the main layers are made from HDPE, LLDPE or a blend of the two (See *col. 13, II. 3-7.)* and the strands in the first surface layers of the films is a polymer made from a copolymer of ethylene (See *col. 13, II. 11-30.)*, however, fail to expressly disclose wherein the bonding layers comprise LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80°C.

However, Velazquez ('297) teaches a polyolefin stretch film having bonding layers comprising LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temp~rature range of 50 - 80°C (See *col. 8, II. 26-47 and col. 3, I. 46.)* for the purpose or providing a film that can be laminated with one or more films (See *col. 6, II. 13-17.)*.

Furthermore, Cederblad (,207) teaches wherein the layers comprising a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80°C *(See col. 12, I. 42 wherein the melting point is 67°C /152 of.)* for the purpose of forming firm bonds *(See col. 6, I. 63.)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's

invention was made to provide a laminate with a surface layer of LLDPE and ethylene with the above melting pOint range and the above strands a taught by Velazquez (,297) and Cederblad (,207) in Rasmussen (,102) in order to provide a bondable laminate as described above.

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., and Cederblad et al. The Examiner now adds Rasmussen and Velazquez. Rasmussen 364 discloses adhesive stripes or dots to form a strong-bond/weak bond laminate or a strong-bond/no-bond laminate, but Rasmussen 364 fails to teach the bonding pattern of this invention. Velazquez also does not teach the film structures of this invention nor its bonding pattern. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 141 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

12. **Claim 145** stands rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743), Cederblad et al. (US 6,204,207) and Johnston (US 3,340,128).

The Examiner states and contends as follows:

Rasmussen (102), Hendrickson ('577), Wynne ('743) and Cederblad (,207) teach the laminate discussed above, however, fail to expressly disclose wherein the polymer material of the strands of at least one of the films A and B includes colored material that makes the colored strands visible through at least one side of the cross-laminate.

However, Johnston ('128) teaches a strand reinforced structure where the polymer material of the strands of at least one of the arrays comprises coloration material in sufficient amount to render the at least one colored layer visible through at least one side of the cross-laminate *(See col.* 24, *I.* 58.) for the purpose of providing a decorative motif *(See col.* 24, *II. 59-60.).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention was made to provide strands with coloration as taught by Johnston (' 128) in Rasmussen (102) in order to provide a product having a decorative motif.

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., and Cederblad et al. The Examiner now adds Johnston. Johnston, like Hendrickson, Wynne et al., and Cederblad et al., disclosed pre-formed scrims, grids or screens of reinforcing fibrous materials, which are adhesively bonded to form a composite structure. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 145 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

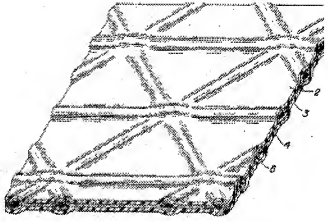
13. **Claim 146** stands rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Hendrickson (US 4,087,577), Wynne et al. (US 5,328,743), Cederblad et al. (US 6,204,207), Johnston (US 3,340,128) and Lappala (US 2,851,389).

The Examiner states and contends as follows:

Rasmussen (102), Hendrickson (,577), Cederblad (,207), Wynne ('743) and Johnston ('128) teach the laminate discussed above, however, fail to expressly disclose wherein the cross-laminate has a thickness at its thickest of about 0.3 mm, and wherein an exterior surface of the film A is corrugated to form a visible pattern of striations extending in one direction, where a spacing of the striations being at most about 3 mm: the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior

surfaces of the cross-laminate, and a depth of the corrugations is sufficient to impart a three-dimensional effect to the cross- laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A.

However, Lappala ('389) teaches a strand reinforced layered structure where the laminate thickness at its thickest is about 0.3 mm *(See col. 3, ll. 34-35 and col. 2, l. 45 wherein the* films *are* less *than 0.015 in (0.381 mm)),* the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate *(See FIG-3,* #2.), where the spacing of the striations being at most about 3 mm *(See FIG-3, corrugations created by strands.)* the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate, and the depth of the corrugations being sufficient to impart a three-dimensional effect to the cross-laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A *(See col. 2, l. 7.),* for the purpose of providing a laminate that is light and strong *(See col. 1,11. 25-28.).*



Therefore, it would have been obvious to a person of ordinary skill in the art the time of Applicant's invention to provide such a spacing and configuration as taught by Lappala ('389) in Rasmussen (,102) in order to provide a light and strong laminate.

Applicant asserts his arguments set forth above here concerning Rasmussen 102, Hendrickson, Wynne et al., and Cederblad et al. The Examiner now adds Johnston and and Lappala. Johnston and Lappala, like Hendrickson, Wynne et al., and Cederblad et al., disclosed pre-formed scrims, grids or screens of reinforcing fibrous materials, which are adhesively bonded to form a composite structure. The combination of these references do not disclose, teach or even suggest the cross-laminates and cannot render claim 146 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

ANSWERS TO APPLICANT'S ARGUMENTS

The Examiner states and contends as follows:

14. In response to Applicant's arguments *(See pp.* 11-25 of *Applicant's Paper filed 712412009.),* it is noted that all arguments have been considered. Applicant has pasted most of the Office action mailed 4/24/2009 into Applicant's Paper filed 7/24/2009.

Applicant acknowledges the Examiner statement.

The Examiner states and contends as follows:

15. In response to Applicant's arguments *(See p.* 12, *under the heading "Preliminary Statement"*

of *Applicant's Paper filed 712412009.)* that its' strands, per the amended claims, are thin co-extruded lines, it is noted that these new limitations are discussed above. As discussed above, the Specification does not have support for these new limitations.

Applicant has addresses these concerns.

The Examiner states and contends as follows:

16. In response to applicant's argument *(See p. 12, last paragraph to p. 13 of Applicant's Paper filed 712412009.)* that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman,* 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

Applicant disagrees with the Examiner. As the number of reference to support a rejection goes up, the strength of the obviousness rejection goes down. This has been repeatedly acknowledged by the courts and in proceedings before the board. Applicant asserts that reliance on so many references speaks loudly that the Examiner is simply picking feature of different references to cobble together a rejection of features that are absence even in their combination as set forth above.

The Examiner states and contends as follows:

17. In response to Applicant's arguments *(See p. 16, para. 2 to p. 17, para. 2 of Applicant's Paper filed 712412009.)* that Rasmussen (,102) does not teach the bonding configuration between the films and the strands, it is noted that the Examiner does not disagree and this is why the secondary references are cited.

Regardless of the rationale for the secondary references, their combinations simply do not disclose, teach or even suggest the co-extruded films of this invention nor the bonding pattern produced between the layers after face-to-face lamination.

The Examiner states and contends as follows:

18. In response to Applicant's arguments *(See p. 17, para. 3 to p. 18 of Applicant's Paper filed 712412009.)* that Hendrickson ('577) does not teach the strands as being coextruded but rather separate structures, it is noted that the Examiner does not disagree, however, as discussed above Rasmussen ('1 02) teaches the coextruded structure *(See p. 5, II. 26-31.)*. Hendrickson ('577) is cited for teaching reinforcement strands for improving the strength of the structure *(See col. 6, II. 36-61.)*. Since Rasmussen's (,102) entire structure is coextruded it would have been obvious that the strands would also be coextruded along with the other films.

But Hendrickson does not teach co-extruding such a structure onto a bonding layer of the film. Thus, the combination of Rasmussen 102 and Hendrickson would produce a structure with a film of Rasmussen bonded to form the structure of Hendrickson with the films of Rasmussen 102, but that is not the structure of the present invention, where the films are formed at extrusion and laminated directly.

The Examiner states and contends as follows:

19. In response to Applicant's arguments *(See p. 18, paras. 3-4 of Applicant's Paper filed 712412009.)* that Hendrickson ('577) and Wynne ('743) do not teach the strands with the claimed melting point, it is noted that these references are not cited for such. Cederblad (,207) is cited for teaching the melting point as discussed above in amended independent claim 123.

Applicant refers the Examiner to his arguments above.

The Examiner states and contends as follows:

20. In response to Applicant's arguments *(See p. 20, para.* 1 of *Applicant's Paper filed 712412009.)* that Lappala ('389) does not teach the strands as claimed and thus not ,the claimed bonding properties, it is noted that Lappala ('389) is not cited for the strand composition. Cederblad (,207) is cited for teaching strands/films with the above properties as discussed above in amended independent claim 123.

Applicant refers the Examiner to his arguments above.

The Examiner states and contends as follows:

21. In response to Applicant's arguments *(See p. 20, para.* 3 *to p.* 21, *para.* 2 of *Applicant's Paper filed 712412009.)* that since Cederblad (,207) does not teach its' strands being coextruded with the films it would not have been obvious to modify Rasmussen (,102), it is noted as discussed above that Rasmussen (,102) teaches the coextruded structure *(See p. 5, II.* 26-31.). Cederblad ('207) is cited for teaching the composition of the strands/ layers *(See col.* 12, *II.* 38-53.). Since Rasmussen's (,102) entire structure is coextruded it would have been obvious that the strands would also be coextruded along with the other films.

Applicant refers the Examiner to his arguments above.

The Examiner states and contends as follows:

22. In response to Applicant's arguments *(See p.* 21, *para.* 3 *to p.* 24 of *Applicant's Paper filed 712412009.)* regarding the various dependent claims and the bonding between the strands and the films, it is noted that the arguments are substantially the same if not the same as discussed above. The Examiner has fully reviewed and responded to Applicant's arguments.

Applicant refers the Examiner to his arguments above.

Having fully responded to the Examiner's Non-Final Office Action, Applicant respectfully urges that is application be passed onto allowance.

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicant's attorney Robert W. Strozier at 713.977.7000

The Commissioner is authorized to charge or credit Deposit Account 501518 for any additional fees or overpayments.

Respectfully submitted,

Date: **22 March 2010**

/Robert W. Strozier/
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